

U. S. DEPARTMENT OF AGRICULTURE  
BUREAU OF BIOLOGICAL SURVEY

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FIELD DIARY

Mr. E. A. Goldman

(Official title.)

Period, June 12 to June 26, 1924

Yellowstone Nat. Park -

NOTICE

Montana (Absoraka Mts.)

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(Thurs)

June 12, Gallatin R.S., Yel.  
Nat. Park. (continued from  
previous book)

Elk. Fifteen or 20 elk  
were seen today in various  
places on the summer  
range on Pan Creek. In  
one bunch of over a dozen  
animals consisting of cows  
and bulls 4 calves were  
seen. Some of the cows  
are in the dark sleek  
summer coat and others  
still retain much of the  
winter coat and have  
a patched appearance.  
Very few signs of elk were  
seen on Spokan Ak.  
probably owing to the  
steep nearly-uniformly  
timbered character, but

June 12 con.

Fan Creek is moderately occupied by elk.

Moose. Three were seen today in the willows on the broad flat forming the bottom along Fan Creek. All were cows - 2 together and another perhaps a  $\frac{1}{4}$  mile away. They were watched feeding for some time. One was clearly seen browsing willows and one appeared to be feeding on the coarse grass or aquatic vegetation among the willows. This was at 1 P.M. A few moose droppings about the size and color of large beans were seen on spruce etc. in the woods.

June 13 (Fri.), Gallatin  
R.S. Nat. Park.

Off at 8.30 A.M. and  
returned here about 4.30  
P.M.

Route was up Bacon  
River bk. for several miles  
to a point where we  
found a trail used by  
elk extending up hillside  
on north side of canyon.  
This we followed until  
it spread out in a  
beautiful grassy area  
known as the Burnt Fork  
section, Burnt Fork  
is a branch of Bacon  
River which enters the  
main canyon rather  
low down. We followed

June 13 con.

the slope on up to the top of a long ridge above timber line which extends across the head of Bacon River Cr. and around the heads of Snowshoe and Monument creeks. From the top we had excellent views of the surrounding country, including the full length of the <sup>of</sup> Gallatin Range, upper Gallatin River, the Grayling Fork, the Teton Peaks in the dim distance far to the south and nearer the precipitous heads of Bacon River and Snowshoe Creeks. The return was across Snowshoe

June 13 con.

Leuk canyon and over a pass into the head of Monument Lk. down which we came and returned to camp.

Forage. Excellent nearly everywhere along the way today, but at the higher elevations had not yet grown much as the snow had only recently melted off. Some elk graze in summer apparently above timber line. A few elk stay in winter along Monument Lk a part of the time and there we found some utilization of willow.

June 13 con.

Elk. A few signs of cow  
elk and calves were  
seen along the lower  
part of Bacon River where  
there is a broad Beaver  
flat, and the trail up  
to Burnt Fork country  
showed considerable use.  
Several were seen in  
the edge of timber so  
that they could not  
easily be counted in  
2 places ~~seen~~ in Burnt  
Flat section and 3 cows  
in another place in  
the same section. Some  
of these had shed but  
others showed a paled  
appearance. On Burnt

June 13 am.

For section consisting of  
extensive open park  
mixed with timber signs  
were seen of a considerable  
number, and calf tracks  
were noted in several  
places. Many of these  
signs were well up  
the slope not far from  
the lower edge of the  
small remaining snow  
banks where the slope was  
fresh and green, but  
short owing to the  
brief period during which  
it has been uncovered.  
A third horse and a  
few old signs were  
seen on the summit



June 13 con.  
above timber line and  
it seems probable that  
a few range up there  
in late summer although  
that does not account  
for the shed horn. There  
is little or no evidence  
that elk cross the high  
pass to Sage Creek at  
the head of Barren  
River. On the return  
route across Snowslide  
Creek we followed a game  
trail ~~with~~ which is no  
doubt part of a formerly  
well travelled route  
across a pass in the  
vicinity of the ridge  
between the heads of

June 13 con

Snowslide and Monument  
Creeks. But there is little  
use of this trail recently.  
A few elk are ranging  
now, however, all through  
this section. A few elk  
also range at present,  
and are said to have  
ranged all winter  
within a mile of Nelson  
Stange Jr. place on  
Monument Creek. It seems  
very clear that the present  
hunting in this section  
prevents a former migration  
across to Sage Creek.

June 14 (Sat.) Upper  
Gallatin River, Gel. Nat.  
Park.

Off at 10.30 A.M., horses  
had stayed. Made camp  
about 6 P.M.

Route along Pauer Pass  
trail from Gallatin Sta  
to top of Pass, then  
westward until we dropped  
into bottom of Gallatin  
Valley near where it  
breaks precipitous along  
sides about 3 miles  
below Pauer Pass.

Trail ascended grad-  
ually to top of Pass  
which is a saddle near  
timber line at about  
9000 ft. Most of snow

June 14 con.  
had melted, but there  
were still small  
drifts in places.

Forage. Very good along  
most of way, but at the  
higher elevations had not  
yet had time to make  
much growth and is  
being considerably utilized  
by the elk which seem  
to be pretty generally  
distributed. Some browsing  
of *Symphoricarpos* and  
was noted.

Elk. About 26 head  
of elk were seen in  
various places, the  
largest bunch consisting  
of about 16 head about  
12 of which were bulls.

June 14. con.

In the evening elk were out in the bottom of the flat along the Gallatin within a  $\frac{1}{4}$  of a mile above and below camp. One stood watching us for some time from the edge of the timber. All elk seen were in good condition. Some are in summer coat and others still are in ragged pelage. A number of large bulls were seen some with growing horns at least 2 ft. long. Apparently most of those at the higher levels are bulls. No calves were seen but

June 14 con.  
a few hawks were wheel.  
The elk are evidently  
following the melting  
snow closely, but do not  
range much off the trail  
in the Pass. Many hawks  
were seen going both  
ways in well worn  
trail across the Pass.  
Trails from the Gallatin  
converge toward the  
Pass and one ~~to~~ well  
worn trail runs north  
just west of the Pass  
to the Helena Lk.  
drainage.

June 15 (Sun), Near Bighorn Pass,  
Yell. Nat. Park.

Off at 8.30 A.M. - Assembled by  
trail up Gallatin Riv. to  
Bighorn Pass. The Pass is very  
narrow, less than a  $\frac{1}{4}$  mile bet.  
precipitous bluffs. On the  
east side the Pass opens in  
a basin perhaps a mile  
across, and on the west  
side is the rather broad,  
gradually sloping Gallatin  
River, the slope ~~continues~~  
increasing near the head  
which is the little Gallatin  
lobe at the foot of 3 Ruins  
Peak. Camped on Panther Lk.,  
several miles east of Bighorn  
Pass. Weather clear, warm and  
fine.

June 15 con.

Forage, seems shorter than at similarly low elevations on the winter range of deer. Whether this is due to dryer conditions or to elk utilization I am not quite sure. Along Panther Creek there is considerable utilization of willow, and it may be that some elk winter here. Some of this willow browsing is, however, no doubt by moose which occur here.

Elk, seen in a number of places today, both cows and bulls, and a few calf hocks were seen along Panther Cr. ~~Near Big~~ Upper Gallatin is fairly well occupied by elk. In Big Horn Pass fresh hocks were seen of a small bunch at least that had gone through June



west <sup>east</sup> to ~~west~~ <sup>east</sup> June 15 con.  
Just through the  
Pass on the east side we  
met a bunch of about a dozen  
and just beyond 7 more that  
were evidently headed for  
the Pass and if not stopped  
by us would apparently have  
gone through from east to  
west. These were, I am inclined  
to think Gaudin elk. An  
elk trail was seen with my  
glasses, looking across from  
near the Pass, along the  
Gallatin base of the hills on  
the western side of the  
River leading toward a  
pass about as high as Big Horn  
across to the Grayling west  
of Three Rivers Peak. In this  
pass I could see a trail  
through the snow.

June 15 con.

Moose. A few signs not  
very fresh seen in the  
willows and fir timber along  
Panther Cr. and willows.  
considerably browned in  
the vicinity.

June 16 <sup>(Mon)</sup> Yellowstone Park,  
Yel. Nat. Park Wyo.

Left camp on Panther Creek  
and skirted the eastern foot-  
hills of the Gallatin Mts.

turning northward up the Teton  
Ck. and Gardiner Ck. ~~valleys~~.  
We rode for several miles  
up the Teton Ck. canyon and  
then turned back and followed  
the Teton Pass trail east  
to Yellowstone Park. From  
our camp near where ~~the~~  
Panther Ck. emerges from the  
mountains it is open, rolling  
country, largely grassland  
extending east for miles.  
The Teton Creek and the branch  
of Gardiner Ck. from the  
point where the latter  
enters it ~~are~~ ~~do~~ flow through

June 16 con.  
a beautiful rolling country  
where little valleys or  
swales are interrupted  
in places by rolling hills.  
Forage. The little valleys  
and rolling hills along  
the east base of Gallatin  
Mts. are apparently shorter  
grazed than the Gallatin  
valley across the mountains.  
Some of the southern exposure  
are pretty intensively grazed  
in winter. Soil is apparently  
not so good as on the western  
side of the mts. Some  
utilization of willow was  
noted and it is probable  
that some elk winter in the  
vicinity.

Elk. A considerable number

June 16 con.  
was seen in the little basin-  
like valleys and on rolling  
hills along the east base  
of the Gallatin Mts. 15  
head mostly cows but including  
a few young bulls ~~was~~ <sup>were</sup> seen  
in one bunch in an open  
meadow before they saw  
us or became alarmed. Five  
small calves were gamboling  
about near their mothers.  
They run much like small  
calves of domestic stock, galloping  
oddly this way and that  
and making sudden turns  
with ~~heads~~ heads meanwhile  
somewhat lowered. Many  
trails were seen converging  
toward Four Pass.

June 17 (Tue) Yellowstone  
Park, Wyo.

Remained here today  
according to routine waiting

June 18 (Wed.) Cody, Wyo.  
Left Yellowstone Park at 5:30  
A.M. with Mr. Rackford and  
Mr. Smith and were taken  
by auto by Mr. H. M. Albright  
to Cody where we arrived  
about 5:30 P.M. This gave  
us an opportunity to see  
something of the borders of  
the Park and at the same  
time of game conditions.

Rackford stopped off at  
Napili R.S. on the Shoshone,  
Nat. Forest, but Smith and I  
continued to Cody.

June 19 (Thurs). Wapiti R.S.,  
Shoshone Nat. Forest, Wyo.

Left Cody about 7 A.M. ~~at~~  
with Mr. Albright in his auto  
and reached this place about  
9 A.M. Horses were ready and  
we left at once on a ride  
over the range of the elk  
in this forest. We <sup>were</sup> joined by  
the Forest Supervisor Mr.  
Langworthy and Rangers  
Douglas and Spencer. We  
rode up Elk Fork of the  
north fork of the Shoshone  
River a short distance and  
turned up a small branch  
cutting from the left and  
thence out and up along  
a high ridge leading back  
to the base of the higher  
mountains where there was

June 19 con.  
still some snow lying in  
places, descending by a  
different route. ~~The~~ <sup>winter and summer</sup>  
~~range~~ <sup>range</sup> of the  
Shoshone Elk is a steep country,  
much of it well sheltered and  
fairly well grassed. The soil  
is loose and friable, however,  
and the surface is less  
completely covered than  
on the Gallatin ranges. The  
areas along the Shoshone  
and Elk Park traps are  
heavily utilized in winter,  
however, show good recovery  
from intensive use, the  
 bunches of grass being strong  
and vigorous. The area  
being a part of the game  
preserve. There is an



June 19 em.

abundance of grass ~~of~~ on  
areas utilized in summer.  
The elk recently left the  
~~lower~~ median levels and are  
said to spend most of the  
summer high up near the  
heads of the streams, but do  
not cross the high mountains  
to any great extent.

Elk, several were seen on  
a high ridge to far away  
determine whether cows or  
bulls. Ranger estimate 800  
or 900 on Elk Fork and  
vicinity. Ranger Spencer says  
there is some intermingling  
of elk across the head of Elk Fork  
with the Thorofare country  
and across the head of Eagle  
Creek, and Mr. Fargusson says  
Yellowstone elk cross to a limited

June 19 1905. Spicer  
states in summer. Spicer  
says that after the hunting season  
that elk cross to the north  
side of the Shoshone and some  
some winter beyond the game  
preserve borders where the  
forage is fairly good. In  
summer elk range far back  
near the heads of canyons nearly  
throughout the Shoshone  
watershed, but winter mainly  
in the lower part of the  
Elk Park watershed. At  
Jones Pass Spicer says a few  
cross. Also a few cross at  
head of Taweh, some elk  
believed to cross from Elk  
Park over Wapiti Ridge to  
South Fork of Shoshone via  
Yellow Ck. Spicer says when  
this area was closed  
and area opened again

June 19 con.  
most that there was a  
noticeable drift up Open Valley  
from Thorofare across the  
of Elk Fork. Total estimate  
for Shoreline elk in North  
1923 is 1390. About 35 elk  
were found dead this spring,  
mostly old bulls and calves  
heavily infested with ticks.  
about 35 were killed by  
hunters.

Deer. About 30 carcasses  
of deer believed to have been  
killed by coyotes were  
found this spring. 1000 of  
deer occupy the general area  
~~Spencer~~

Coyotes. Spencer says that  
coyotes have been seen in  
packs of a dozen together.

June 20 (Fri.) Yellowstone Park,  
Yell. Nat. Park.

Left Wapiti R.S. about 10.30 and  
reached Yellowstone Park (Mammoth  
Camp) about 10.30 P.M.

Ranger Spencer took Smith,  
Rachford and I to Sylvan  
Pass the Park entrance east of  
Sylvan Pass in his car and then  
we caught one of the yellow  
buses of the Yellowstone  
Transportation Co. to Yellowstone  
Camp, where we arrived about  
6 P.M. There we were ~~not~~  
met by Chief Ranger S.T. Wooding  
about 9 P.M. and were taken  
the remaining 31 miles to  
Mammoth Camp. We had a very  
pleasant trip and saw on  
the way one bunch of about  
100 elk near Lake Yellowstone and

June 20 con.  
Several small bunches all  
in summer pelage, but no  
calves were noted.

June 21 (Sat.) Tower Falls R.S.  
Morning spent in preparation  
for a trip northeast out of  
the Park to the Absaroka  
Fault to cover conditions on  
the southern slope of the  
Boulder Divide.

Off at 1.30 P.M. and reached  
Tower Falls R.S. about 6 P.M.  
Followed the main road  
across a part of the so-called  
Black Tail range formerly  
used as a horse pasture or  
range.

Forage. The general forage  
cover is fairly good, but

June 21 cont.

in many places have evidently  
been overgrazed at least in  
the past. In many places it  
shows the effect of the  
dry weather that has been  
general. The area apparently  
received less rain and snow  
than the Gallatin country,  
but impresses me as being  
in most places better  
covered with a denser  
stand of grass. There is  
much forage in the Gallatin  
country but more of it seems  
to me to be herbaceous. Many  
of the aspens along the  
way are scarred by elk,  
partly by gnawing, but much  
of it by rubbing.  
Saw a few deer along

June 21 con,  
the way, but this picture is  
used by elk in summer to a  
limited extent only.

Bears. A black bear came  
walking along the hillside  
within about 150 yds. of the  
station about 7 o'clock. Bears  
have recently been troublesome  
in trying to get at food at a  
road camp near the station  
recently. One of the men set  
a small shepherd dog on the  
bear. The dog barked at the  
bear but was not very anx-  
ious to take hold of him and  
the bear moved off delib-  
erately looking back occasionally.  
Yesterday a bear tried to force  
his way into a cabin by  
scratching at the door. When  
a man inside opened the

door the bear was ready to  
come on in but as he cre-  
ated it fell backward off  
the porch when rapped on  
the nose with a short iron  
bar, and soon shuffled off  
growling.

Met Mr. F. E. Martin, Forest  
Supervisor from Livingston  
and Ranger Johnson who are  
to accompany us on our  
trip.

(Sun.)

June 22. Slough Cr. R.S.  
Off at 8.50 A.M.: Arrived  
here about 1.30 P.M. - 27 mi.  
and <sup>and Jaws</sup> ~~and Jaws~~

Road was across yellowstone  
Ruins and up Slough Cr.  
The valley of Slough Cr. is  
rather broad fertile  
country varying from a



June 22 con.

Two hundred yards to over  
half a mile. Part way up  
we passed the grassy bottoms  
where several hundred tons  
of hay are cut and fed  
in winter to elk. Mts. are  
fairly steep and rocky on  
both sides. At one point  
above the hay ranches  
an old landslide from  
the left where the face  
of the mountain became  
detached reached part  
way across the valley.  
Grass a good  
stand and generally  
good except in the Tamar  
Valley where it shows  
effects of rather heavy  
grazing. This was grazed

June 22 can  
by domestic stock in the  
past and has apparently  
never fully recovered. It  
is also much grazed by  
elk and probably buffaloes.  
Aspens and lodgepole  
pines especially younger  
ones are very seriously  
damaged in fact there  
is little or no reproduction  
along the valley near  
the hay ranches where  
hay is fed in winter.  
Willows also hard hit.  
Elk, ~~one~~ <sup>a few</sup> seen and a  
few tracks of others  
noted. One calf was  
with a group of 4 or 5.  
Antelope. Found some  
in one place and ~~2~~  
2 in another.

Moore. Tracks along  
Slough Lk. near R.S.

June 23 (Mon.) Slough Lk.  
R.S.

Off at 6 A.M.; returned at  
6 P.M. to same camp. - 30 mi.

Route today was up the  
ridge between Foot Lk. and  
Wolverine Lk, the north branch  
of Slough Lk. entering from the  
east, for several miles and then  
turned down into Wolverine Lk  
Canyon and followed that  
up to its head in the pass  
leading across <sup>near</sup> the extreme  
head of Stillwater River. We  
then climbed Pease Mt.  
which extends well above  
timber line, then returned to  
the Pass mentioned and crossing

June 23

around to the east of Peace  
Mts. along the edge of Stillwater  
Valley to Lake Abundance in a  
pass separating the head of  
of Lake Abundance Cr. from  
the Stillwater drainage.  
We then descended Lake  
Abundance Cr. to Flough Cr.  
and returned to the Station.

Much of the country is  
timbered and the general  
area is high, but there  
are some open glades  
especially along streams  
affording considerable grass  
and weed forage. There  
is little forage in the  
timber - spruce and fir,  
but often considerable  
forage where the timber is  
lodgepole pine or Douglas  
fir. Wonderful views were

June 23<sup>rd</sup> con.

had of the surrounding mountains from the ~~top~~ top of Rose Mt. I do not remember ever to have had finer mountain views from one point. We were completely surrounded by horizon peaks clad in partially melted snow, largely above timber line, the lines of snow alternating with bare ground bringing them out in striking contrast. Cut-off Mt. on our right as we ascended the valley of Wolverine Cr. presented a particularly striking appearance.

Forage. The entire area covered today was sheep range, rather closely cropped

June 23 con.

I judged, but perhaps not overgrazed as there is a good stand of grass and weeds or herbaceous vegetation coming up. Very <sup>few</sup> ~~little~~ signs of game of our.

Elk. Tracks were seen of a few elk in various places <sup>one in Wolverine Pass</sup> and it is clear that a very few remain on the area. The mountain wall along the Park boundary from Slough Lk. over through Cut off Mt. to the Pass at the head of Wolverine Lk. seems to form an effective barrier for elk.

Moose. A few signs seen on both Wolverine and Lake Abundance creeks. <sup>drawn mellowes.</sup>

June 23 con.

Castor. One killed near  
the head of Wolverine Cr.  
was first seen walking  
about in a grassy glade.  
Its stomach contained about  
a qt. of vegetable fragments  
including what appeared  
to be about 2 tablespoonsfuls  
of the inner bark of lodgepole  
pine, various herbs and  
grass.

Moose. ~~Moose signs seen in~~  
~~swampy spots~~

Deer. Saw a few ~~signs~~ tracks  
of Lake Abnawa Cr.  
Mt. Sheep. Three seen by  
Rachford on Pease Mts.

(Yuc.)

June 24, Buffalo Park R.R.

Off at 7.30 A.M.; arrived here 12.30 P.M. - Dist. 12 mi.

Route was across Slough Cr. and up the ridge south & west of Bull Cr. to the top of a ridge at about 9500 ft. at the head of Bull Cr. then down a side canyon to the R.S. on Buffalo Park. Ascented rather steeply nearly all the way through timber, but open glades appear in places.

Forage. An abundant growth of dwarf hempnuckle, ~~and~~ some other small shrubs and herbaceous vegetation in the timber up to the higher elevations recently bare of snow where almost nothing has yet started to grow. It will be at best July 15 before much



June 24 con.

Garage will be available for game or for sheep at the higher elevations. <sup>Garage</sup> today on the area closed to domestic stock is much better than yesterday on areas grazed by sheep. We had very fine views of the surrounding country from the summit. Our views extended as far as to Pilot and Dunder mts. across the Wyo. line east of the Park and to Three Rivers Mt. in the Gallatin.

Beck. A few tracks seen along the trail up the ridge.

Moose. A number of tracks on trail up ridge.

In afternoon made trip to Hadden Lake about 3 miles down the valley below the Sta. and located in the timber on

June 24 cont.

the hill side behind what is probably an old land slide.

Elk. Numerous signs seen along valley bottom and ~~at~~ <sup>5</sup> ~~mi~~ in many.

Moose. A good many signs along valley below station.

Forage. Willows grow ~~apparently~~ to a limited extent. By moose only indicates that elk do not winter in numbers here. Ranger Johnson says a few bull elk winter in the general area.

June 25 (Wed.) Hellroaring  
R.S.

Off at 7.30 a.m.; reached  
Hellroaring R.S. about 4 P.M.

Route today was across Buffalo  
Fork and up a ridge to the top  
of Hummingbird Peak near the  
head of Bull Lake, and along a  
ridge north until blocked by  
snow. We turned back and took  
the trail down the slope to  
Hell Roaring R.S.

Forage. Good on lower slopes, but  
on the higher slopes where snow  
has recently melted it has not  
yet started to grow.

Elk. A few signs of elk and  
were seen as high as near

Telephone Basin which is summer  
range for a few only. And a few  
signs of elk were seen on the

June 25

Hillroaring slope. It is evident that few elk range in the area. A few seen near the Stables.

Moose. A bull was seen by Smith in descending the Hill Roaring side of the ridge we crossed. And hawks were seen in a number of places, including the immediate vicinity of Hill Roaring Sta.

Deer. A number of hawks were seen and it seems probable that they are not uncommon in the general area traversed.

June 26, Hell Roaring R.D.  
Off at 7.30 a.m. and returned to  
same station at 8.30 P.M.

Route was up ridge east of  
Hell Roaring to Middle Fork which  
was crossed above its mouth  
and we turned up West Fork for  
a short distance to a cabin  
on the sheep grazed area. Then  
across Hell Roaring and back  
down the ridge on the west  
side of the creek via Carpenter  
Gabe. Went up W. Fork to last meadow.

Forage. Very good at the lower  
elevations on closed area, but  
on sheep grazed area forming  
drainage was evidently closely  
cropped.

Track. Very few signs. Tracks of  
one noted on sheep grazed  
area ~~on the~~ on West Fork

of Hell Roaring a short distance about month.

Mt. Lion. Tracks of one seen on West Fork of Hell Roaring Cr.

Lynx. Tracks of one seen on W. Fork of Hell Roaring Cr.

Canis. One seen near Hell Roaring R.S. and tracks of one seen on W. Fork of Hell Roaring Cr.

Citellus columbianus. A few seen on sage brush flat and dry hill-sides near Hell Roaring R.S.

Thomomys. Range to top of highest mt. Throw out dirt which remains as ~~sh.~~ ridges after snow is gone, then apparently remains inactive for considerable time.

Roll 20 - Montano - 1924

PENALTY FOR PRIVATE USE  
TO AVOID PAYMENT OF  
POSTAGE, \$300.

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Southern Elk Herd. (Migration)  
Park Ranger Geo. Wynn  
says that in the fall of  
1922 he was stationed  
just north of Therofae,  
Ok. near the Park line  
and the first severe snow  
storm he thinks about  
Nov. 1, split the elk in  
that locality - part of  
them went down the  
Yellowstone and part  
crossed the Yellowstone  
and started westward  
toward Snake River. There  
would perhaps naturally  
have gone down Pacific  
Ok. drainage if it had not  
been for the hunters in the  
open section. Storm from SW,  
and about 6 in. of snow fell.



Diary - Park Rangers - Game

Territory covered: ~~by the animals~~

Distance travelled and condition

Weather conditions; depth of <sup>and</sup> snow.

General forage conditions.

Elk (of wild selection)

~~Range~~

Total number seen.

No. Bulls, cows, calves in separate  
herds.

Gen. condition; fat on lean? In  
summer or winter coat? No. of  
bulls with and without horns?

Condition of horns: <sup>growing</sup> in velvet?

Stags? <sup>at different times</sup> Suckers?

Localities favored: Timber? Open  
park? Grazing or browsing on  
~~native~~ northern or southern

slopes? Note particular plants  
favored. Browsing aspen or  
willow and if so to what extent?

Can you find preceding  
any evidence of drift, giving  
direction and exact locality.

~~Do any animals seen. Do  
any evidence of effect on game.~~

Does the browsing of willow  
exceed the growth of the  
preceding year? Does the  
browsing extend over an  
entire willow clump or patch,  
or only <sup>usually</sup> ~~extend to~~ a few twigs?

Are any dead animals found  
infested with ticks and if so  
to what extent?

~~Any animals found~~  
No. of animals found dead.  
Cause of death.

Predatory animals seen. Any  
evidence of effect on game.

Thosbone,

~~800 - 900~~

950 - 1000 - Mar. 1918 (Count)  
and estimated 1500

350 red billed along road in  
Fall 1919

3000 in at same time.

A few deer come down early  
in the fall for fields at the falls  
and about 200 with this

Foot of 2 am up time in  
Feb. 80 up in Tennall county  
on Pine Forest in Ind.  
Perhaps Macomber in Sept. which  
was in county army co. etc.